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SUPPLIER MANAGEMENT PRACTICES AND PROCUREMENT PERFORMANCE OF SELECTED PARASTATALS IN KENYA

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ABSTRACT

The main goal of the study was to find out how supplier management practices affected parastatals in Kenya's procurement performance. The study utilized descriptive research design in evaluating how supplier management practices relate to procurement performance. The target population of the study was 187 parastatals in Kenya. The study applied stratified random sampling procedures in selecting a study sample of 65 parastatals. Questionnaires with closed questions were utilized to collect quantitative primary data. The filled questionnaires were serialized, cleared up for validity and input into a statistical package for social sciences software (SPSS). Means and standard deviations were used to summarize descriptive analysis findings. In this instance, multiple linear regression analysis was used to determine the connection between Kenyan parastatals' procurement performance and supplier management practices. The study found that supplier collaboration and practices for supplier development (=0.384, p-value=0.000) and selection (=0.327, p-value=0.033) had a positive and significant impact on parastatal procurement performance in Kenya. The positive effect of supplier quality management on parastatal procurement performance in Kenya was found to be statistically insignificant (=0.151, p-value=0.194), despite being positive. This study concluded that supplier development and supplier collaboration practices positively and significantly influence procurement performance of parastatals in Kenya. The study also concluded that supplier quality management practices positively but insignificantly influence procurement performance of parastatals in Kenya. This study recommended parastatals in Kenya to pay close attention to supplier development practices such as supplying training, financing, and information sharing are crucial. Secondly, It was suggested that the parastatals in Kenya create a concise policy framework to guide initiatives on supplier selection practices including considering value for money when selecting suppliers, valuing process cost management, and placing significant value in on-time delivery. Parastatals in Kenya are also encouraged to concentrate on supplier collaboration practices by engaging cross-functionally with suppliers, working to ensure open communication and trust with suppliers, and having strategic alignment with them to additionally further develop their performance in procurement. This study finally suggested that comparable research be carried out in other sectors to produce a diverse set of findings.

Key Words: *Supplier Development, Supplier Selection, Supplier Quality Management, Supplier Collaboration*

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INTRODUCTION

Procurement management is becoming a strategic priority of institutions both in private and the public sector. This is due to procurement has been portrayed as a crucial integrative corporate activity that prioritizes long-term value delivery and generation over immediate cost reduction (Hong & Kwon, 2012). To ensure that projects and procedures continue smoothly and successfully, procurement management makes sure that all goods and services are acquired in the proper manner. In Africa, public procurement contributes between 50-70 percent of imports. As a result, public procurement reforms have been implemented by the majority of governments with the key focuses being to assure openness, enhance competitiveness, and promote financial transparency in public institutions (OECD, 2016).

The public procurement system in Kenya has evolved over time, beginning in the 1960s with no restrictions on the use of Treasury Circulars, followed by the Public Procurement and Disposal Act (PPDA) in 2005 and then the 2006 Procurement Regulations in 2006. Despite these huge strides made towards an effective public Procurement system as a country, public institutions in Kenya still have inefficient public procurement functions and many cases of manipulation of tenders (Yambariga, 2016). In recent years, parastatals such as the Ministry of Health (MOH) and Kenya Power among others have been caught up by several procurement scandals ranging from, flouted procurement rules, single sourcing, over-priced transformers, faulty meters, billing and power tokens scams (Wafula, 2021, Ibrahim & Mutuku, 2022).

Procurement performance is achieved when independent performance metrics that ensure growth in market share through the improvement of the quality of products, reduction of lead times and enhancement of operational efficiency are put in place (Muo & Jane, 2018). Different scholars have measured the level of procurement performance differently for instance Macharia and Mwangagi (2016) measured procurement performance using; cost reduction, timely delivery and the level of customer satisfaction. Komora and Kavale (2020) used cost reduction, reduced lead time, timely deliveries and the quality of products to measure the level of procurement performance. Other measures used to determine procurement performance include; compliance rate, price competitiveness, supplier defect rate, invoice and purchase order correctness, supplier lead time, vendor accessibility, frequency of purchasing for emergencies, cost per invoice and purchase order, and procurement return on investment (ROI). This study measured the dependent variable in terms of cost management, organizational flexibility and level of satisfaction.

Supplier collaboration refers to the administration of the cooperative connection with the major players in the supply chain while procuring goods or services. According to Nix and Zacharia (2014), as the business environment continues to be more competitive and volatile collaboration has become particularly important. Elements that reflect the level of supplier collaboration in organizations may include; key supplier programs and supplier relationship management, information sharing, long-term planning and contracts and level of trust. Focusing on intensive supplier collaboration has been associated with inter-firm learning (Sofka and Grimpe, 2010) as cited by (Kahkonen, Lintukangas, Ritala & Hallikas, 2017).

A parastatal is a government-run organization established to legally operate as a commercial venture on behalf of the government (Ngunyi, 2014). It also indicates a certain portion of the country's economic aspect under the control and management of the government to provide basic services to its citizens. The number of parastatals currently stands at 187 (Government of Kenya, 2022). The State Corporations Act Cap 446 enacted by the Kenyan parliament governs the establishment, management and regulation of state corporations. Section 5 of this Act states that "every state company shall have all of the powers

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necessary or convenient for carrying out its functions" State Corporations Act (2010).

The budget outlook document for 2020–2021 noted that parastatals misappropriate 30% of the budgetary allotments in carrying out the budget, which includes procuring products, works, and services. According to the 2020 Auditor General Report, this bleak state of affairs is widespread among parastatals. Since the auditor general's reports are rarely followed up on and, even when they are, they can take up to 10 years, Chemjor (2015) claims that there appears to be a premeditated misuse of public funds. There are numerous instances where parastatals violate the Public Procurement and Asset Disposition Act, 2015, by paying for goods that are never delivered, charging exorbitant prices, using single-source suppliers, and order splitting.

State firms have made significant contributions to the economic and social growth of the nation, but given that the majority of them currently perform poorly in the procurement sector, the government needs to move quickly with its national strategy for parastatal reforms. A recent assessment of 18 important state enterprises by the National Treasury found that only three of the 18 entities assessed were deemed profitable, highlights the severity of the issue. Others either barely made back their costs, were unprofitable, or were losing money (Murumba, 2022). Parastatals are incurring high inventory carrying cost for instance the high gas prices in the country is attributed to supply chain problem that have resulted from Kipevu Oil Terminal, a State-owned entity that is unable to handle very large LPG vessels (Kisero, 2022). These inefficiencies and violations also reflect poor procurement performance among parastatals in Kenya according to Chemjor (2015) which requires the government to erect measures to advance the procurement performance of parastatals.

Statement of the Problem

Public procurement among public institutions is rated highly for content and management of procurement contract, bid opening, evaluation and award and bid submission score with scores of 73, 71 and 69 respectively. However, they receive a low performance guarantee rating of 58, followed by a score of 57 for needs assessment, call for tenders, and bid preparation. The score for paying suppliers was the lowest, coming in at 37. Private companies' participation is hampered by payment delays, notably small and medium-sized businesses (SMEs) who have trouble with cash flow. Payment delays put bidders at risk commercially; they hinder entrepreneurialism and make it difficult for them to enter or stay in the public market (World Bank, 2017).

Effective procurement performance ensures that processes are streamlined, price and cost of raw materials are decreased, and higher quality sources of supply are identified all of which enhances organizational performance (Ivalua, 2020; Ndei & Mutuku, 2021). Ineffective procurement performance on the other hand is riddled with scandals which cause huge losses on money to the entities involved. Parastatals in Kenya have made immense contributions to Kenya's economic and social development. However, there are numerous instances where parastatals have violated the Public Procurement and Asset Disposition Act, 2015, by paying for goods and services that are never delivered, charging exorbitant prices, using single-source suppliers, and order splitting. They have also been in the spotlight for ineffective procurement performance in terms of high level of inventory aging, low inventory turnover ratio, poor contractual, procurement of low-quality items, inflated prices, low policy compliance and low purchase order accuracy among other procurement challenges (Malalo, 2020).

Various studies have been carried out both at the international and local level in the area of procurement performance and how it affects overall operational efficiency internationally and locally, for instance, In China, Yang and Zhang's (2017) research examined the supply chain mnagement performance. The results do not appropriately apply in explaining supplier

management practices and procurement performance in government parastatals since the prevailing business environment in China and Kenya are different.

Beinomugisha (2019) used parastatals with Ugandan rather than Kenyan domiciles in her research on supplier management and performance at the Uganda Revenue Authority but was unable to explain the link between supplier management practices and procurement performance. Rotich, Aburi, and Kihara discovered that supplier management techniques are critical to achieving operational efficiency in their 2014 study on the effects of certain supplier development methods on Safaricom's competitive advantage in Kenya. Yet, because this study was so narrow in its scope, a significant vacuum remains that needs to be filled. Mwingi (2011) concentrated on the impact of supply chain management methods on the performance of the oil industry, but overlooked the impact of procurement practices on organizational performance.

Considering the aforementioned research, it is clear that few researches have been conducted on supplier management practices and how they affect procurement performance, particularly for parastatals in Kenya, despite the fact that there have been several studies done in the areas of supply chain management and procurement. In the recent past, Parastatals in Kenya have been facing so many procurement issues including but not limited to failure to pay suppliers on time, embezzlement of funds, illegal tendering process and overpricing of purchased goods to get kickbacks. In light of this, this study sought to ascertain the relationship between supplier management practices and procurement proposal in Kenya.

Objectives of the Study

The general objective of this study was to evaluate the relationship between supplier management practices and the procurement performance of parastatals in Kenya. The study was guided by the following specific objectives;

- To ascertain the relationship between supplier development practices and the procurement performance of Kenyan parastatals.
- To establish the relationship between supplier selection practices and the procurement performance of Kenyan parastatals.
- To find out the relationship between supplier quality management practices and the procurement performance of Kenyan parastatals.
- To determine the relationship between supplier collaboration practices and the procurement performance of Kenyan parastatals.

LITERATURE REVIEW

Theoretical Literature

Theory of Constraints (TOC)

This theory was invented by Goldratt (1984) through his 1984 novel, “The Goal”. The Theory of Constraints is a continuous improvement approach that stresses the significance of locating the "system constraint" or bottleneck. The theory presumes that, each process functions as a chain with weak links that prevent the system from achieving its full potential. The constraint must be detected and controlled throughout the system in order to make any significant improvements. Constraints in the procurement process may be in form of; uncertainty in demand, poor information integration and delayed delivery of the appropriate goods. Thus, the procuring company attempts to find such constraints in the procurement process and work collectively to eliminate them constraints to enhance the process.

Entities have used the Theory of Constraints to develop solutions for a variety of procurement inadequacies, such as poor quality or raw material shortages. Other procurement inefficiencies include extended supplier lead times, late or erratic supply of bought parts or raw materials, and poor supplier quality. Many businesses employ the Theory of Constraints to boost efficiency, productivity, and quality while lowering instances of late delivery, excess inventory, and extra pay. The Theory of

Constraints is used by successful organizations to make strategic and tactical decisions for continuous improvement. Thus parastatals can apply the Theory of Constraints to maximize their procurement performance (Pfeiffer, 1995).

Quality Improvement Theory

Quality Improvement Theory was developed by Edwards (1986). The argument of the theory is that the management of quality enhances the performance of all aspects of the performance of any organization and that the fact that senior management is accountable. (Deming, 1986). The theory thus places responsibility for managing supplier quality in manufacturing organizations right in front of the company's top management. The theory goes on to claim that management is in charge of quality systems and that systems are to blame for around 80% of problems in organizations (Hill, 1995).

Thus, the theory holds that supplier quality management improves performance and that senior management is essential to the realization of any quality management system as they invest in the policies, create the corporate culture, select suppliers, and create connections that last (Deming, 1986). Deming also suggests that supplier quality improvement enhances the performance of businesses through providing effective managerial techniques that help eliminate poor quality control issues. The theory further argues that supplier quality improvement enhances performance through reducing waste, rework, litigations thus enhancing product quality, client retention, and ultimately profitability thus enhancing product quality, client retention, and ultimately profitability (Deming, 1986) and that senior management is accountable for it.

Hubert (2000) supports Deming's theoretical approach by arguing that the theory visualizes the creation of systems in an organization that promotes learning and cooperation to enable the implementation of process management practices. Process management techniques support ongoing enhancements to procedures, goods, and services while also fostering employee happiness, which is essential for fostering a customer-focused mindset and, ultimately, improving an organization's performance. The Quality Improvement Theory assumes that there is a systematic method for fixing problems, and as a result (Goetsch & Davis, 2006).

The theory is however criticized because it was originally written for manufacturing sector organizations thus to some extent, it doesn't apply to other sectors. The Quality Improvement theory however, is pertinent to this study because it contends that enhancing supplier quality management improves firm performance by lowering waste, rework, lawsuits, and worker turnover while improving quality, worker satisfaction, adherence to brand, and eventually profitable (Deming, 1986). It also contends that it is the top management's responsibility. As a result, the theory supports the link between supplier quality management methods and procurement performance.

Partner Selection Theory

The Partner Selection theory was formulated based on the work of numerous academicians, including Ellram (1990); Lorange, Roos and Bronn (1992). The theory routes for a step-to-step supplier selection process from the beginning until the end. The theory provides clear guidelines on selecting suppliers. The theory argues that an effective step to step supplier selection process from the start point to the end enhances quality which in turn improves performance. The theory contends that in order for the supplier selection process to improve performance, it must be carried out in accordance with clearly defined procedures and that suppliers must possess specific qualities that meet the needs of the procuring entity, including high-quality goods and services, good value for money, process cost management, and reasonable pricing (Lorange, Roos & Bronn, 1992).

Theorists postulate a balanced process in making of decisions on the basis of extremely stringent evaluation criteria. According to the general objective of the agreement, certain partner

characteristics are more or less important. As a result, a cogent selection criterion that prioritizes the partner characteristics of significance is designed to direct the selection process. This aspect decides the suppliers or partners that are chosen. According to a study by Angeles and Nath (2000), which was based on data gathered on how firms choose their trading partners, characteristics like strategic commitment and trading partner flexibility influenced the aspect for choosing trade partners.

Empirical Review

Various academics have evaluated the connection between supplier development and procurement performance, for instance; Mwesigwa and Nondi (2018) explored how World Food Programme Kenya's procurement effectiveness was impacted by supplier development. The researchers utilized a descriptive survey research methodology. The researchers employed the SPSS to analyze data. The study found that WFP's procurement performance in Kenya is positively impacted by supplier development. The researchers then suggested that WFP continue to develop their suppliers in order to ensure good governance among them. Nevertheless, the study only looked at supplier development and did not look at any other supplier management methods.

Nabiliki, Wanyoike, and Mbeche (2018) looked into how supplier development practices affected procurement performance in companies in the Kenyan food and beverage industry's Nakuru East Sub-County. The composition of study's population was accountants and procurement personnel employed by Nakuru East Sub-County food and beverages production companies. Data was collected from procurement staff and accountants from 16 organizations. The study data was obtained via a questionnaire. According to the report, supplier development measures such as supplier training and financial support improve procurement system efficiency. The researchers then recommended Nakuru East sub-County beverages and food production companies to pay suppliers as quickly as reasonable and offer monetary help to providers to improve their administrations. The study focused on Food and beverage production Businesses in Nakuru East Sub-County and not parastatals which are not similar because of difference in the level of resource control.

Ouko and Juma (2020), who investigated how supplier evaluation affect efficiency of the procurement function in Kisumu County, are just two of the many researchers who have looked into the connection between supplier selection and procurement performance. 75 procurement personnel from 25 private healthcare facilities in Kisumu County made up the study population. The researchers utilized structured questionnaires to gather data. The findings indicate that the procurement performance of private healthcare facilities in Kisumu County was strongly impacted by the financial health, quality dedication, and professionalism of suppliers. The researchers therefore came to the conclusion that improving the procurement function in any firm requires both dedication to supplier quality and financial stability. The study only focused on supplier evaluation not other supplier management practices.

Obinda and Gichure (2017) investigated the impact of supplier identification on the efficiency of Nairobi City County's supply chain. All eleven county government departments were included in the study's sample. In Nairobi City County's procurement department, 237 employees were taken into account by the study. The performance of the supply chain is influenced by supplier communications, according to the researchers. The study found that poor communication channels affected the procurement department's efficiency and made it more difficult to choose the best supplier to meet both unexpected and anticipated needs. The researchers came to the conclusion that by accelerating the procurement of goods and services, supply selection at Nairobi City County was significantly influenced by public procurement policies. The study focused solely on supplier selection not other supplier management practices. The study was carried out five years ago thus could

not account for the changes in the business environment.

The relationship between quality management on procurement performance has been examined by various researchers for instance; Rureri (2018) investigated how strategic quality management practices affected the performance of Kenya's steel manufacturing industry. The survey was conducted cross-sectionally by the researcher. The study focused 46 Steel Manufacturing Companies in Kenya that are listed in the Kenyan Business Directory of 2015. The researcher used Krejcie and Morgan's Sample Size Table to ascertain a sample of 42 employees of the companies. It was revealed that the that the steel manufacturing companies' success was greatly influenced by strategic top management support practices, strategic client relationship practices, strategic quality performance measurement practices, strategic employee relations practices, and strategic suppliers' relations practices. The researcher then came to the conclusion that Kenya's steel manufacturing firms are not properly using strategic quality management practices. The steel manufacturing companies was the research focus but not Kenyan parastatals.

Kingi and Mwangangi (2017) assessed quality management impact towards effectiveness of procurement in Kenyan public universities. The population was the main campuses of all Kenyan public universities, and its sample was 525 staff members who were chosen procurement officers. The researchers discovered that quality management improved the procurement performance in Kenyan public universities by assisting them in maintaining a desired level of excellence. The researchers then recommended that public universities should maintain long-term relationships with suppliers to ensure that they continually improve on value creation. This study was based on Public Universities only whereas this study will focus on other Parastatals other than Public Universities in Kenya.

Various academics have examined the connection between supplier cooperation and procurement performance, for instance; Arusei and Musau (2020) looked at how supplier collaboration affected Elgeyo Marakwet County Government procurement performance. The county government's Elgeyo Marakwet employees were the focus of the research, particularly the staff in procurement, main shop, ICT, finance, quality assurance, and suppliers. The population constituted of 140 employees whereby a 104 employees were sampled. Collection of data was done using questionnaires. It was discovered that collaboration of suppliers had a great effect on performance of procurement process. It was proposed that procurement performance was greatly influenced by supply chain practices in Elgeiyo Marakwet County. The study focused only on supplier collaboration not other supplier management practices.

Komora and Kavale conducted research in 2020 that aimed at examining the management of supplier relationship on the Coast Water Service Board's procurement efficiency. The researchers employed both inferential and descriptive research designs. The study targeted 62 employees of Coast Water Service Board from which a sample of 54 was derived. The study found that supplier lead time, supplier commitment, supplier collaboration and supplier feedback develop a solid, meaningful connection with the procurement performance of the Coast Water Service Board. It was concluded that supplier relationship management impacted procurement performance. The researchers then recommended that the Management of Coast Water Service Board should emphasize more on building long-term supplier relationships for easy flow of procurement processes. The researchers used both inferential and descriptive research designs whereas this study will utilize a descriptive research design.

Procurement performance has been studied by different researchers for instance; Nawi et al. (2017) evaluated the measurement issues in

procurement performance and supplier management private Companies in Malaysia. The study concluded that by implementing a supplier development program, the supply chain department has already achieved significant success in monitoring the procurement process, which includes factors like order processing time, cycle time of delivery, effectiveness, efficiency, and dependability. The researchers also observed that the benefits of developing a measurement system surpass the expenses and work required to do so. The study concluded that the results of the key performance index measurements provide critical information for stakeholders focusing in particular on the productivity and efficacy of the work done by the procurement department. The study focused on Malaysian Private Company which could not apply to Kenyan parastatals.

Odero and Ayub (2017) studied how procurement policies in state sugar producing corporations in Western Kenya affect procurement performance. Employee data from the procurement department was gathered by the researchers utilizing questionnaires and a descriptive survey research technique. The study found that staff competence affected the performance of procurement positively, planning in procurement insignificantly affected how the company's procurement process performed. However, the study only looked at procurement procedures and not supplier management procedures.

Conceptual Framework

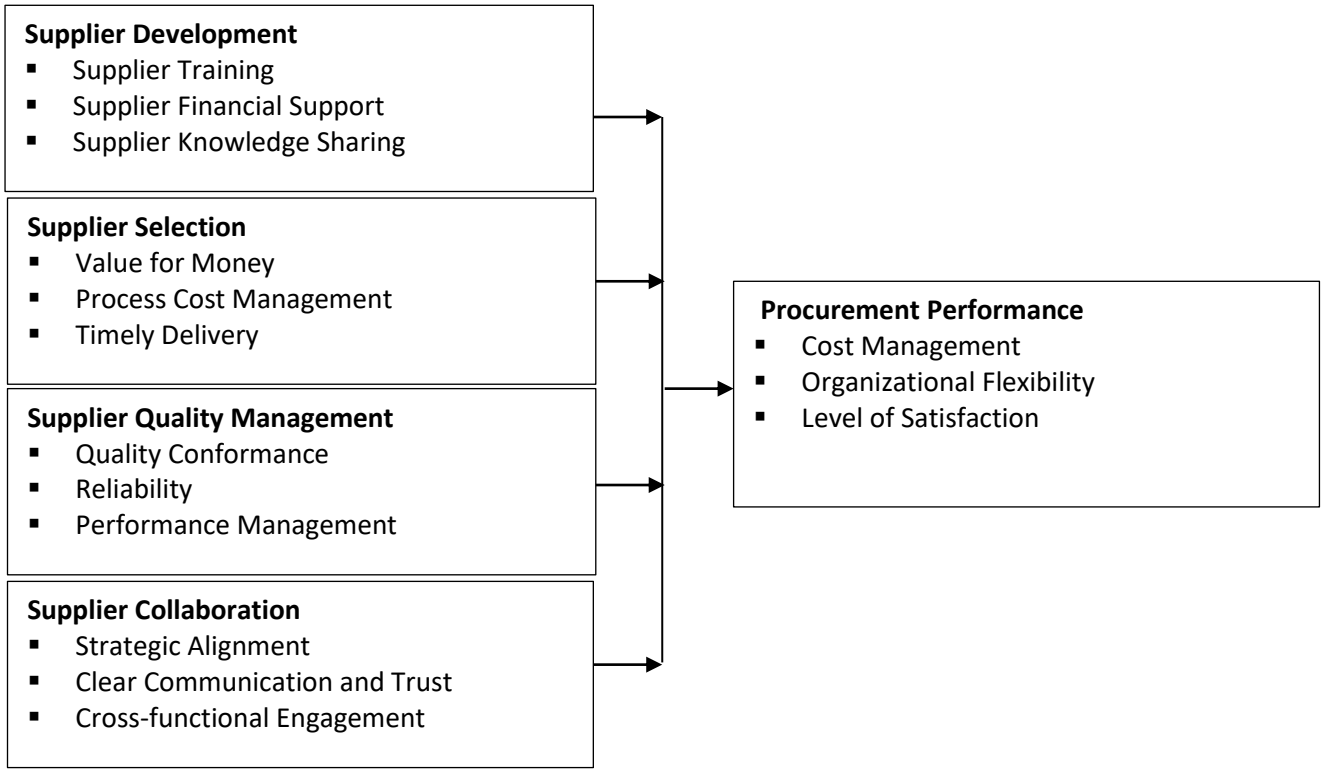

Figure 1: Conceptual Framework.

METHODOLOGY

A descriptive research design was employed to answer question because the data came from a representative group of people through interviews or questionnaires. The research focus was 187 parastatals in Kenya. The research utilized stratified random sampling. The size of the study's sample was determined using the Yamano-Taros formula.

The semi-organized questionnaires were utilized to gather the information for the review. The questionnaires were used to ensure and standardize collection of data (Kelling, *et. al.*, 2019). Closed-ended questions gathered more quantitative information. A pilot study was used to evaluate the research tools. The assessment of internal consistency of the study tools was achieved through Cronbach's Alpha. The completed questionnaires were cleaned, data coded and then input into the SPSS statistical tool. The analysis of descriptive techniques applied in describing the extent of procurement performance among Parastatals in Kenya were standard deviation and mean. The findings were displayed in tables for easy comprehension.

Regression analysis was used to investigate the connection between Kenyan parastatal procurement performance and supplier management practices. Since the factors were estimated on an ostensible scale, they were evaluated into faker variable to get scores for relapse investigation. Procurement performance was regressed against measures of supplier management practices which are supplier development, supplier selection, supplier quality management and supplier collaboration. A regression model was established and estimated. Procurement performance was the dependent variable while supplier management practices (supplier development, supplier selection, supplier quality management and supplier collaboration) independent variable. The regression model was utilized in determining the effects on procurement performance of supplier management methods:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_t$$

Whereby:

Y–Procurement Performance
X_1- Supplier Development Practices
X_2- Supplier Selection Practices
X_3- Supplier Quality Management Practices
X_4- Supplier Collaboration Practices
β_0-constant of the model
β_1- β_4– regression coefficients
ε_t –Stochastic error term

FINDINGS

Descriptive Results

This assessed how supplier management practices related to the Kenyan parastatals' procurement performance. In particular, the study determined the association between supplier collaboration practices, supplier development strategies, supplier selection practices, and supplier quality management practices and the procurement performance of Kenyan parastatals. Descriptive analysis was performed in the study to determine the outcomes for these objectives, which were described below.

Supplier development practices and procurement performance of Kenyan parastatals

Descriptive analysis for supplier development practices was done in the study. The results are displayed in the table 1.

Table 1: Supplier Development Practices

Statement	1	2	3	4	5	Mean	Std Dev
Our parastatal offers supplier training	12.1%	5.2%	17.2%	31.0%	34.5%	3.71	1.32
Our parastatal provides supplier financial support	15.5%	3.4%	12.1%	27.6%	41.4%	3.76	1.43
Our parastatal practices supplier knowledge sharing	6.9%	12.1%	17.2%	34.5%	29.3%	3.67	1.22
Average						**3.71**	**1.32**

Source: Research Data, 2022

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The data revealed that a mean of 3.71 percent of respondents agreed with the assertion that their parastatal provides supplier training, with the biggest proportion of participants, 34.5%, strongly agreeing and 31% agreeing. Only 17.3% of all respondents agreeing. A standard deviation of 1.32, on the other hand, indicates that the replies were widely dispersed from the mean value. The second statement tried to determine if parastatals provide financial support to suppliers, with a mean of 3.76 indicating that the majority of respondents agreed. Nonetheless, 41.4 percent strongly agreed that parastatals provide financial support to suppliers, followed by 27.6 percent who agreed and 15.5 percent who strongly disagreed. The final statement sought to ascertain whether parastatals share supplier information. In this scenario, a large number of respondents, 3.67 percent on average, agreeing, while only 6.9 percent strongly opposed. In contrast, 34.5 percent of respondents agreed with the aforesaid argument, and 29.3 percent strongly agreed. However, as demonstrated by a standard deviation of 1.22, individual responses varied greatly from the mean of 3.67.

Supplier selection practices and procurement performance of Kenyan parastatals

On a scale of 1 to 5, with 5 being a strong agreement and 1 representing a strong disagreement, the descriptive data in Table 2 showed the outcomes that are pertinent to supplier selection practices.

Table 2: Supplier Selection Practices

Statement	1	2	3	4	5	Mean	Std Dev
Our parastatal looks at value for money when selecting suppliers	12.1%	6.9%	8.6%	31.0%	41.4%	3.83	1.37
Our parastatal values process cost management	6.9%	12.1%	10.3%	27.6%	43.1%	3.88	1.29
Our parastatal values timely delivery	5.2%	10.3%	5.2%	50.0%	29.3%	3.78	1.11
Average						**3.83**	**1.25**

Source: Research Data, 2022

As per the results as illustrated in Table 2, a large number of respondents (a mean of 3.83) agreed that when selecting suppliers, their parastatals search for value for money. In this instance, 31% of participants agreed with the aforementioned statement, followed by 41.4 percent who strongly agreed. While 12.1% of respondents strongly disagreed, 6.9% of respondents disagreed. The standard deviation of 1.37 indicates that there was no clustering of responses around the mean of 3.83. On whether the parastatals value process cost management during supplier selection, majority of participants, mean 3.88 agreed. By percentage, 43.1 strongly agreed, 27.6 agreed, 12.1 disagreed while 6.9 strongly disagreed. The standard deviation of 1.29 indicates that the responses were not clustered around the mean value. The final statement sought to establish whether the parastatals look for value in timely delivery whereby most of the respondents, 50 percent and mean of 3.78 agreed. However, 10.3 percent of respondents disagreeing with the aforementioned statement, while 5.2 percent strongly disagreed.

Supplier quality management practices and procurement performance of Kenyan parastatals

The impact of supplier quality management on Kenyan parastatals' procurement performance was also examined by this study. Based on a Likert scale of 1 to 5, the average responses are displayed in Table 3 using standard deviation and mean.

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Table 3: Supplier Quality Management

Statement	1	2	3	4	5	Mean	Std Dev
Our suppliers must ensure quality conformance	15.5%	19.0%	8.6%	32.8%	24.1%	3.31	1.43
Our suppliers Reliability	13.8%	13.8%	20.7%	31.0%	20.7%	3.21	1.33
We have supplier performance management	24.1%	12.1%	6.9%	34.5%	22.4%	3.19	1.53
Average						**3.24**	**1.43**

Source: Research Data, 2022

As seen in table 3 above, 32.8 percent of respondents agreed that their supplier must assure quality conformity, while 24.1 percent strongly agreed. However, 15.5 percent of interviewees strongly disagreed that suppliers must ensure quality compliance, and 19 percent agreed. A mean of 3.31 suggests that the majority of them were unconcerned with the aforementioned allegation. A standard deviation of 1.43 indicates that the responses were distributed over the scale rather than concentrated on the mean. Similarly, a mean of 3.21 show that most of participants agreeing that suppliers are reliable, with 31% agreeing while 20.7 percent strongly agreed. Only 27.6 percent of the total respondents disagreed. On whether the parastatal has a supplier performance management, 34.5 percent, in this case the largest proportion, agreed supported by 22.4 percent who strongly agreed. However, A standard deviation of 1.53 indicates that 24.1 percent of respondents strongly disagreed, there was large variation of responses from the mean value.

Supplier collaboration practices and procurement performance of Kenyan parastatals

Table 4 showed how much study participants agreed or disagreed with three statements about supplier collaboration on a Likert scale of 1 to 5.

Table 4: Supplier Collaboration

Statement	1	2	3	4	5	Mean	Std Dev
We have strategic alignment with our suppliers	6.9%	12.1%	20.7%	41.4%	19.0%	3.53	1.14
We strive to ensure clear Communication and trust with our suppliers	10.3%	5.2%	15.5%	32.8%	36.2%	3.79	1.28
We have cross-functional engagements with our suppliers	19.0%	5.2%	15.5%	25.9%	34.5%	3.52	1.49
Average						**3.61**	**1.30**

Source: Research Data, 2022

According to the study's findings, 41.4 percent of respondents (41.4 percent on average) felt that they have strategic alignment with their suppliers. 19.9 percent strongly agreed while 20.7 percent were neutral. In contrast, 12.1% of respondents disagreed, with 6.9% strongly disagreeing. The next statement sought to establish whether the parastatal strives to ensure clear communication and trust with its suppliers whereby the largest proportion of participants, 36.2%, strongly agree

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while 32.8 percent agreed. On whether parastatals have cross-functional engagements with suppliers, the largest proportion of respondents represented by 34.5 percent strongly agreed while 25.9 percent agreed. Only 24.2 percent of the respondents disagreed. A mean of 3.52 show agreement of the respondents on average that parastatals have cross-functional engagements with suppliers.

Procurement Performance of Parastatals in Kenya

The dependent variable in this study was the procurement performance of Kenyan parastatals. This section gives the three indicators' average responses, as indicated in Table 5.

Table 5: Procurement Performance

Statement	1	2	3	4	5	Mean	Std Dev
Our parastatal practices cost management	10.3%	13.8%	19.0%	31.0%	25.9%	3.48	1.30
Our parastatal has organizational flexibility when it comes to procurement	10.3%	10.3%	12.1%	31.0%	36.2%	3.72	1.33
Our suppliers have a high level of satisfaction in the procurement processes	17.2%	12.1%	8.6%	36.2%	25.9%	3.41	1.44
Average						**3.54**	**1.36**

Source: Research Data, 2021

With regard to the parastatals practising cost management, the majority of respondents (mean=3.48) were neutal, according to the data. In this example, 31% of participants agreed, with 25.9% strongly agreeing that parastatals practice cost management. However, 10.3 percent of the study participants strongly disagreed that parastatals practising cost management as 13.8 percent disagreed. A standard deviation of 1.3 indicates a wide range of responses from the mean value implying high variance of responses among participants. The second indicator was based on whether the parastatal has attained organizational flexibility when it comes to procurement whereby 36.2 percent strongly agreed followed by 31 percent who agreed while 12.1 percent were neutral. On whether suppliers have a high level of satisfaction in the procurement processes of Kenya parastatals, the largest proportion of participants, 36.2 percent agreed as 25.9 percent strongly agreed. However, as shown by a mean of 3.41 and 8.6 percent, on average, majority of respondents were neutral with regard to high level of satisfaction of suppliers of the parastatals.

Inferential Analysis

The process of determining the connection between the practices of supplier management and the procurement performance of Kenyan parastatals, the study applied a significance level of 5% to the coefficients of the variables. The consequences of the connection and relapse examinations are introduced in the segments that follow.

Correlation Analysis

The relationship between procurement performance (dependent) and the independent variables was investigated using correlation. Table 6 displays the findings of the research variables' correlation coefficients.

Table 6: Pearson Correlation Analysis Findings

Correlations		Supplier development	Supplier selection	Supplier quality management	Supplier collaboration	Procurement Performance
Supplier development	Pearson Correlation	1				
	Sig. (2-tailed)					
Supplier selection	Pearson Correlation	.287*	1			
	Sig. (2-tailed)	0.029				
Supplier quality management	Pearson Correlation	.544**	.452**	1		
	Sig. (2-tailed)	0.000	0.000			
Supplier collaboration	Pearson Correlation	.560**	.513**	.486**	1	
	Sig. (2-tailed)	0.000	0.000	0.00		
Procurement Performance	Pearson Correlation	.682**	.527**	.581**	.656**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	58	58	58	58	58

Source: Research Data, 2022

Supplier development practices as shown in the aforementioned table 4.9, have a positive and significant relationship with parastatal procurement performance in Kenya (R = 0.682, p=0.000). This suggests that parastatals in Kenya's procurement performance would significantly improve with an increase in supplier development. Mwesigwa and Nondi (2018)'s study, which tracked down a positive and critical connection between's provider improvement and obtainment execution, is upheld by the discoveries. Similar to this, a positive and statistically significant relationship was found in the study (R = 0.527, p=0.000) between supplier selection practices and the procurement performance of Kenyan parastatals, with a positive change in the former corresponding to a significant improvement in the latter. The results are consistent with Mwesigwa and Nondi (2018) who found that supplier selection criteria have a substantial positive correlation with procurement performance.

Additionally, there is a positive and statistically significant correlation (R = 0.581, Sig=0.000) between the practices of supplier quality management and the procurement performance of Kenyan parastatals. According to the findings, parastatals in Kenya's procurement performance

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would significantly improve with a positive shift in supplier quality management. The results are collaborated by Kingi and Mwangangi (2017) who found that supplier quality management enhances the procurement performance in public institutions by helping them maintain a desired level of excellence. Lastly, a positive and huge relationship was found to exist between provider cooperation practices and obtainment execution of parastatals in Kenya (R = 0.656, Sig=0.000). For this situation, a positive change in provider joint effort would result to a critical improvement in obtainment execution of parastatals in Kenya.

Regression Analysis

A linear regression model with a 5% level of significance was applied in investigating how supplier management practices affected procurement performance of Kenyan parastatals. The application of Pearson's r coefficients were applied in determining the how the variables were associated and T statistics were also utilized in the determination of significance influence. Table 7 summarizes the model's findings.

Table 7: Model Summary

R	R Square	Adjusted R Square.	Std. Error of the Estimate.
.798	0.636	0.609	0.589602

Source: Research Data, 2022

The R-square was 0.636. This suggests that the study's predictor variables were responsible for 63.6% of the variation in parastatal procurement performance in Kenya (Supplier collaboration practices, Supplier quality management practices, Supplier selection practices and supplier development practices). The remaining variation in parastatal procurement performance in Kenya is anticipated to be accounted for by other factors that were not included as predictor variables in the study's model. According to Oromo and Mwangangi (2017), effective supplier management practices contribute to the procurement performance of public institutions. On the other hand, the 0.609 as the value of adjusted R square adjusts for the number of predictors of the regression model that have significant effect and indicates the predictor variables that actually affected procurement performance. This indicates that the study's significant effect predictor variables were responsible for 60.9 percent of the variation in parastatal procurement performance in Kenya.

Table 8: Model Significance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.204	4	8.051	23.16	.000
Residual	18.424	53	0.348		
Total	50.628	57			

Source: Research Data, 2022

The value of p at 0.000, the findings demonstrate that the model as a whole was statistically significant. An F statistic of 23.16, which is higher than the critical value of 2.546, supported this. This demonstrated that the model as a whole was statistically significant because the calculated F was higher than F critical. Based on the findings, supplier collaboration practices, supplier quality management practices, supplier selection practices, supplier development practices are suitable predictors of procurement performance of parastatals in Kenya.

Table 9: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	-0.164	0.411		-0.399	0.692
Supplier development practices	0.384	0.103	0.404	3.716	0.000
Supplier selection practices	0.237	0.108	0.221	2.189	0.033
Supplier quality management practices	0.151	0.115	0.141	1.316	0.194
Supplier collaboration practices	0.262	0.119	0.248	2.204	0.032

Source: Research Data, 2022

Optimal regression model:

Procurement Performance = -0.164 + 0.384 Supplier development practices + 0.237 Supplier selection practices + 0.262 Supplier collaboration practices

It was observed that if all the independent variables were simultaneously equal to zero, the predicted value of procurement performance of parastatal in Kenya would be -0.164. The parastatals in Kenya's procurement performance was positively and significantly influenced by supplier development practices, as evidenced by the beta value of 0.384 and the p-value of 0.000. This suggests that parastatals in Kenya's procurement performance would improve significantly and positively as a result of an increase in supplier development practices. The outcomes concur with the discoveries of Nabiliki, Wanyoike and Mbeche (2018) that provider advancement rehearses essentially further develop acquirement execution in food and drink modern firms. Correspondingly, Otieno (2017) asserted that supplier development enhances the effectiveness of procurement process.

Similarly, the standardized regression coefficient for supplier selection practices was 0.237. This indicated that parastatals in Kenya's procurement performance would increase by 23.7 percent with a unit increase in supplier selection. The significant level at 5%, the t-statistic for the regression coefficient for supplier selection was significant (p=0.033). This recommends that an improvement in provider choice would result to huge improvement in acquirement execution of parastatals in Kenya. Obinda and Gichure (2017) also found that effective communication channels influence the efficiency of the procurement process by ensuring that the best supplier is chosen to meet both anticipated and unanticipated requirements. In a similar vein, Kemunto (2017) demonstrated that factors influencing supplier selection have a beneficial effect on procurement performance. Additionally, Krop and Iravo (2016) suggested that supplier selection has a positive impact on procurement performance.

Furthermore, from the standardized coefficients, supplier quality management influenced positively the procurement performance of Kenyan parastatals, as given by beta value of 0.151. At p=0.194, however, this effect is not significant. This suggests that parastatals in Kenya's procurement performance would improve, albeit insignificantly, if supplier quality management was improved. This finding is corroborated by Rajab (2015) who established that implementation of supplier quality management practices is faced by challenges such as poor leadership, cultural dynamism and lack of top management commitment to quality which overall affect procurement performance. Therefore, Rajab (2015) came to the conclusion that, despite the positive influence of supplier quality management on procurement performance, the effect may not be significant due to the aforementioned factors.

Lastly, the standardized regression coefficient for supplier collaboration was 0.262. This indicated that a unit increase in the supplier collaboration would result in 26.2 percent increase in procurement

performance of parastatals in Kenya. Similarly, the t-statistic for the regression coefficient for supplier selection was significant as p=0.032. This suggests that an improvement in supplier collaboration would significantly improve parastatals' procurement performance in Kenya. This outcome is steady with Arusei and Musau (2020) who found that supplier collaboration positively influenced procurement performance. On the same note, Komora and Kavale (2020) found that supplier collaboration develops a solid, meaningful connection with procurement performance.

Taking into consideration supplier management practices (predictors) that significantly influenced procurement performance of parastatals in Kenya, a new conceptual model is show in figure 2.

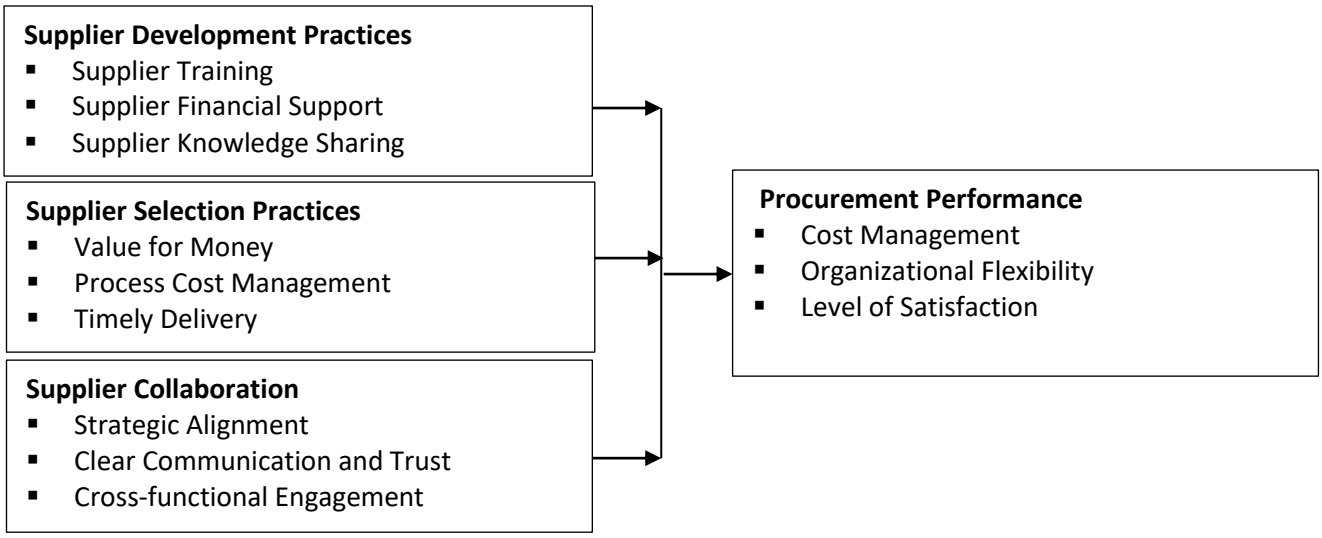

Figure 2: Revised Conceptual Framework

CONCLUSIONS AND RECOMMENDATIONS

This study's conclusion was based on the findings that supplier development practices including offering training, financial assistance, and the practice of information sharing, significantly and favorably improves Kenya's parastatal procurement performance. The research also came to the conclusion that parastatals' procurement performance in Kenya is positively and significantly influenced by supplier selection that prioritizes value for money when choosing suppliers, process cost control, and on-time delivery.

The study also concluded that supplier quality management has a positive impact on the performance of Kenya's parastatal procurement, albeit insignificant. Furthermore, this study drew the conclusion that supplier collaboration significantly and positively influenced procurement performance of parastatals in Kenya. Cross-functional interactions with suppliers, efforts to maintain open lines of communication and trust with them, and strategic alignment with them all improve procurement performance.

The study made the following recommendation to help parastatals in Kenya to improve their procurement performance:

- Given the positive and significant influence on procurement performance, there is need for parastatals in Kenya to pay close attention to supplier development practices such as supplying training, financing, and information sharing are crucial.
- Secondly, it is recommended that the Kenyan parastatals and the government at large should develop a clear policy framework to guide initiatives on supplier selection practices including considering value for money when selecting suppliers, valuing process cost management, and placing significant value in on-time delivery.

- This research also advises Kenyan parastatals to prioritize supplier quality management practices. This can be achieved by using elite supplier performance management to make sure that suppliers abide by quality standards and are reliable.
- Parastatals in Kenya are also encouraged to concentrate on supplier collaboration practices by engaging cross-functionally with suppliers, working to ensure open communication and trust with suppliers, and having strategic alignment with them in order to further improve their procurement performance.

Recommendations for Further Research

It is only from parastatals in Kenya where the data was gathered. However, diverse supplier management practices may have an impact on the procurement performance of a number of Kenyan institutions in both the public and private sectors. Therefore, it's possible that the opinions of Kenya's participating parastatals were skewed. The study was also limited to a review of the literature that only suggests supplier collaboration, supplier quality management, supplier selection, and supplier development in addition to the theories that underpin these variables. As a result, the four variables mentioned in this study do not truly show the field of public procurement practices. As a result, a comparable study should be carried out using additional variables to see what other factors affect Kenyan parastatals' procurement effectiveness.

REFERENCES

Adeniran, A. O. (2019). Application of Likert scale's type and Cronbach's alpha analysis in an airport perception study. *Scholar Journal of Applied Sciences and Research*, 2(4), 1-5.

Allred, S. B., & Ross-Davis, A. (2011). The drop-off and pick-up method: An approach to reduce nonresponse bias in natural resource surveys. *Small-Scale Forestry*, 10(3), 305-318.

Arusei, B., & Musau, E. G. (2020). The Effect of Supplier Collaboration on Procurement Performance in the County Government of Elgeyo Marakwet. *Journal of Procurement & Supply Chain*, *4*(2), 1- 11.

Beinomugisha, M. (2019). Supplier Management and Supplier Performance at Uganda Revenue Authority Headquarters Nakawa (Doctoral dissertation, Uganda Management Institute).

Chemjor, R. K. (2015). Supplier evaluation criteria and procurement performance in parastatals in Kenya (Doctoral dissertation, University of Nairobi).

Chen, Y. (2011) Structured methodology for supplier selection and evaluation in a supply chain. *Journal for information science*, 20(2),33-36

Daniel, A. (2018). *African countries commit to e-procurement.* Retrieved at https://www.cips.org/supply-management/news/2018/october/africa-commits-to-e-procurement/

de Souza, S. V., & Junqueira, R. G. (2005). A procedure to assess linearity by ordinary least squares method. *Analytica Chimica Acta*, 552(2), 25-35.

Gatobu, J.G. (2018). Influence of supplier relationship management on procurement performance in fast-moving consumer goods manufacturing firms in Nairobi City County, Kenya. *Strategic Journal of Business & Change Management,* 5(1), 26-35

Gogtay, N. J., & Thatte, U. M. (2017). Principles of correlation analysis. *Journal of the Association of Physicians of India*, *65*(3), 78-81.

Hakansson, H. (Ed.). (2015). Industrial Technological Development (Routledge Revivals): A Network Approach. Routledge.

Ibrahim, D. Y., & Mutuku, M. K. RELATIONSHIP BETWEEN PROCUREMENT MANAGEMENT PRACTICES AND PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN WAJIR COUNTY, KENYA.

Irungu, G.M. (2016). Effect of quality management practices on firm performance of animal feeds manufacturers in Kiambu and Nairobi City Counties. *Strategic Journal of Business & Change Management,* 3(4),23-39.

Kamau, H.W., & Odari, O. (2017). Effect of Supplier Collaboration on Organizational Competitiveness of Manufacturing Firms in Kenya: Case of East African Breweries Ltd. *International Journal of Recent Research in Social Sciences and Humanities* (IJRRSSH) 4(4), 28-32.

Kelling, S., Johnston, A., Bonn, A., Fink, D., Ruiz-Gutierrez, V., Bonney, R., ... & Guralnick, R. (2019). Using semi structured surveys to improve citizen science data for monitoring biodiversity. *BioScience journal*, 69(3), 170-179.

Kingi, D.O. & Mwangangi, P. (2017). Influence of quality management on procurement performance in public universities in Kenya. *International journal of social sciences and information technology*, 3(5),36-44.

Komora, M.K. & Kavale, S. (2020). Effect of supplier relationship management on procurement performance of coast water service board. *International Journal of Advanced Research and Review* (IJARR), 5(7), 01-18.

Krop, E. & Iravo, M. A. (2016). Effects of supplier selection on performance of procurement function in public sector: A case of West Pokot County government. *International Academic Journal of Procurement and Supply Chain Management, 2* (2), 51-73.

Linhares, A. (2009). Theory of constraints and the combinatorial complexity of the product-mix decision. *International Journal of Production Economics.* 121 (1): 121–129.

Lukhoba, E.J. & Muturi, W. (2015). Effect of Supplier Development on Supplier Performance: A Survey of Food Manufacturing Companies in Kisumu County. *International Journal of Economics, Commerce and Management, United Kingdom,* 3(11)

Mabin, V. (1999). Goldratt's "Theory of Constraints" Thinking Processes: A Systems Methodology linking Soft with Hard. School of Business and Public Management Victoria University of Wellington.

Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of economic development, environment and people*, 7(1), 23-48.

Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2015). Purchasing and supply chain management. Cengage Learning.

Muo, C. & Omwenga, J. (2018). Role of Supplier Management Practices in Optimization of Operational Performance in Telecommunication Service Industry in Kenya: A Case of Safaricom Limited. *International Journal of Social Science and Humanities,* 6(1), (224-245).

Mwesigwa, F. M. & Nondi, R. (2018). Effects of supplier development on procurement performance of world food programme. *The Strategic Journal of Business & Change Management,* 5 (2), 1184 – 1205.

Nabiliki, J., Wanyoike, D.M. & MbecheW.N (2018). Influence of Supplier Development Practices on Procurement Performance in Food and Beverage Manufacturing Firms in Nakuru East Sub-County, Kenya. *International Journal of Science and Research (IJSR),* 8(10),212-231.

Ndei, F. M., & Mutuku, M. (2021). Electronic Procurement and Performance of Non-Governmental Organizations in Kenya. Empirical Evidence from Pathfinder International, Kenya. *J. Bus. Manag. Sci*, *9*, 71-80.

Ndumbi, C. W., & Okello, B. (2015). Effect of staff training on level of compliance to public procurement system in parastatals in Kenya. *International Journal of economics, Commerce and management*, *3*(6), 613-626.

Obinda, R.A. & Gichure, J.M. (2017). Effects of supplier selection on supply chain performance; case of Nairobi City County. *International Journal of Social Sciences and Information Technology.* 3(5),63-75.

Odhiambo, M. W., Gachoka, H. G., & Rambo, C. M. (2018). Relationship between age diversity and employee performance of public universities in Western Kenya.

Oromo, F.A.O. & Mwangangi, P. (2017). Effect of supplier development on procurement performance in public sector in Kenya: a case of Kenya Electricity Generating Company Limited (KENGEN). *International Journal of Supply Chain Management,* 2(3),42 – 59.

Ouko, S., & Juma, D. (2020). Effect of supplier evaluation on performance of the procurement function of private health institutions in Kisumu County, Kenya. *The Strategic Journal of Business & Change Management*, 7(2), 40-57.

Pfeffer, J. (1985). *Organizations and Organization Theory.* Marshfield, MA, Pitman

Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, 52(4), 591-611.

Sileyew, K. J. (2019). Research design and methodology. *In Cyberspace,* 7(5),1-12.

Sillanpaa, I., Shahzad, K. & Sillanpaa, E. (2015). Supplier development and buyer-supplier relationship strategies – a literature review. *Int. J. Procurement Management,* 8(1/2), 227

Taherdoost, H. & Brard, A. (2019). Analyzing the Process of Supplier Selection Criteria and Methods. *Procedia Manufacturing Journal*, 5(8),32-45.

Trietsch, D. (2004). Theory of Constraints, Department of Information Systems and Operations Management, University of Auckland, *Working Paper,* 281.

White, K. J. (1992). The Durbin-Watson test for autocorrelation in nonlinear models. *The Review of Economics and Statistics,* 8(21),370-373.

Yang, F., & Zhang, X. (2017). The impact of sustainable supplier management practices on buyer-supplier performance: An empirical study in China. Review of International Business and Strategy. https://doi.org/10.1108/RIBS-08-2016-0043.